Name:

ml1112paper: Solve by factoring (v12)

1. Solve the equation

$$x^2 + 2x - 35 = 0$$

$$(x+7)(x-5) = 0$$
$$x = 5$$
$$x = -7$$

2. Solve the equation

$$x^2 - 4x - 12 = 0$$

$$(x+2)(x-6) = 0$$
$$x = 6$$
$$x = -2$$

3. Solve the equation

$$7x^2 - 6x + 31 \;=\; 6x^2 + 7x - 5$$

$$x^2 - 13x + 36 = 0$$
$$(x-4)(x-9) = 0$$
$$x = 9$$
$$x = 4$$

4. Solve the equation

$$9x^2 + 12x + 10 \;=\; 8x^2 + 3x - 4$$

$$x^2 + 9x + 14 = 0$$
$$(x+2)(x+7) = 0$$
$$x = -7$$
$$x = -2$$

5. Solve the equation

$$11x^2 - 84x + 49 = 0$$

$$(11x - 7)(x - 7) = 0$$
$$x = 7$$
$$x = \frac{7}{11}$$

6. Solve the equation

$$11x^2 - 69x - 56 = 0$$

$$(11x + 8)(x - 7) = 0$$
$$x = 7$$
$$x = \frac{-8}{11}$$

7. Solve the equation

$$11x^2 - 44x + 61 \;=\; 6x^2 + 3x + 5$$

$$5x^2 - 47x + 56 = 0$$
$$(5x - 7)(x - 8) = 0$$
$$x = 8$$
$$x = \frac{7}{5}$$

8. Solve the equation

$$5x^2 - 19x - 37 \;=\; 2x^2 - 6x - 7$$

$$3x^2 - 13x - 30 = 0$$
$$(3x + 5)(x - 6) = 0$$
$$x = 6$$
$$x = \frac{-5}{3}$$